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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,836	07/24/2001	Hiroshi Tanaka	Q65448	4281

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EXAMINER

BAYERL, RAYMOND J

ART UNIT	PAPER NUMBER
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2173

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/910,836

Applicant(s)

TANAKA ET AL.

Examiner

Raymond J. Bayerl

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 5, 7, 9/5, 9/7, 10 - 16, 18 - 28 is/are rejected.
- 7) ☒ Claim(s) 6, 8, 9/6, 9/8, 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1 – 5, 7, 9/5, 9/7, 10 – 16, and 18 – 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Howards Koritzinsky et al. (“Howards Koritzinsky”; US# 6,598,011 B1) in view of Sitka et al. (“Sitka”; US# 6,349,373 B2).

As per independent claim 1’s “medical image management system”, Howards Koritzinsky discloses a medical image management system that includes medical diagnostic data acquisition equipment, as well as picture archiving communications and retrieval systems (see col. 5, lines 25-30).

The claimed set of a “mobile image data reception device” that obtains information from “medical image data storing means”, with “a function of storing the medical image data sets” reads upon the architecture and layout of Howards Koritzinsky’s service system 10 which is illustrated for providing remote service to a medical diagnostic system 12. **In Fig.1**, the medical diagnostic systems include a magnetic resonance imaging (MRI) system 14, a computed tomography (CT) system 16, and an ultrasound imaging system 18. These are “images of patients” (claim 27), and “one of X-ray images, CT images, and MR images” (claim 28). The diagnostic systems may be positioned in a single location or facility, such as a medical facility 20 (see col. 4, lines 30-37), where system controllers such as unit 46 (computing systems capable of local storage, and thus reading upon “image data storing means”) are collectively connected to personal computer 72 (“mobile image data reception device”; a personal computer is capable of being moved, especially in the case of a laptop or

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notebook device), which then connects via a remote access network 80 to a remote service facility 22 (col 6, lines 5 – 48).

As per claim 1's "image data storage apparatus", Howards Koritzinsky teaches linkage to service facility 22 via the remote access network 80...Data may be exchanged between the diagnostic systems, field service units, and remote service facility 22 in any suitable format (see col. 6, lines 34-41) and a local storage source at the diagnostic system, as well as from a remote library (see col. 4, lines 15-17). While this shows a connection *per se* to a "storage apparatus", it does not **explicitly** disclose that the actual "image data sets" are maintained at the remote location; the emphasis of Howards Koritzinsky is more upon the ability to provide service and support over the network.

However, Sitka's direct storage manager (DSM) 220, used for hospital film archival procedures, has a centralized location within archive server 160 that actually stores "image data sets" in the style of applicant's "image data storage apparatus". Furthermore, Sitka teaches controlling the management of the "image data" in one of a short term storage device 170, mid-term storage device 180 and long term storage device 190 (see col. 5, lines 6-8 and see Fig. 2) based on predetermined period of time (see blocks 340 and 360 in Fig. 3). This means that in Sitka, a form of "storage period management means" is provided for "managing a storage period of each of the medical image data sets", depending upon which form of memory is used.

It would therefore have been obvious to a person having ordinary skill in the art at the time the invention was made to include Sitka's time-dependent,

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archival "storage apparatus" into the Howards Koritzinsky's arrangement of connected computing devices, at the acquisition, transmission and centralized sites. By so doing, Howards Koritzinsky's "image data sets" would be properly maintained in the form of storage that best meets the storage and access objectives of the medical image system. Howards Koritzinsky has an improved ability to provide needed images and retain them as future needs might require, by using a "storage apparatus" such as Sitka's at the facility 22 location.

Independent claim 5, contains similarity to claim 1, except that the "medical image data storage means" is recited as being directly connected to the "data storage apparatus", this having the above-discussed "storage period management means". But the controllers such as unit 46 in Howards Koritzinsky's fig 1 can be said to have such connectivity, even through the intermediate computer 72. Howards Koritzinsky's arrangement even shows direct connections between the originating "storage means" units and the remote facility 22, which as per Sitka would be an "apparatus" that judges a "storage period" by the memory types used.

As per independent claim 14, the connection of "storage means" to "storage apparatus", with "managing a storage period", is generally similar to claim 5 and is rendered obvious under Howards Koritzinsky/Sitka for reasons similar to those developed above.

Claim 2's "transmitting a reception completion signal to the medical image data storage means at the time of reception completion of the medical image data sets" will be found in the manner of signal transmission that one would find

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in a networked arrangement such as Howards Koritzinsky's, when made to have storage as per Sitka. When the "reception" is complete, there will inevitably be a signal from the subsystem 12 in Howards Koritzinsky that is the last. This will also be the case with the use of "a storage completion signal" from the "image data storage apparatus" (claims 9/5, 9/7). When the central storage needs to obtain such an upload, on the other hand, "a reception request signal" (claim 7) will advantageously be processed to the local storage device in the Howards Koritzinsky arrangement.

As per claim 3, the rejection of claim 1 establishes that the prior art combination will be enabled for "receiving the medical image data sets stored in the medical image storage means" in Howards Koritzinsky's pathway from the controller 46 to the computer 72, and then to the network 80. At the computer 72 location, "storing the medical image data sets" will then occur. A similar line of reasoning applies to claim 4 (see also claim 11), in which the "image data storage apparatus" (suggested by the use of an archive server as per Sitka in at the location 22 of Howards Koritzinsky) is capable of "receiving the medical image data sets transmitted from the mobile image data reception device" and "storing" them with "storage period management"—the computer 72 of Howards Koritzinsky will read data contents as per its disclosed functionality to the central site, that has storage of its own such as Sitka's. See also claim 15's additional recitation in the "computer-readable recording medium", where the "reception device" reads from the "storage means" more directly associated with the acquisition, then transmits to "the image data storage apparatus". The "image

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data storage apparatus", as suggested by Sitka, is then capable of "managing the storage period" (claim 16; see also claim 12).

The capability for "outputting a desired one of the medical image data sets" (claims 10, 13) would be seen in any archiving arrangement such as Sitka's, which to be useful would have to store and output together.

In choosing a destination for the storage in Sitka, between short-term, mid-term and long-term, the "image data storage apparatus" effectively "determines a storage expiration date" (claims 18, 21, 23). A "storage period" is thereby specified (claim 24), and a Sitka-style archive jointly involves "the storage period" inherent in the destination device and "at least one of a date of reception" (claims 19, 22). Sitka further considers "at least one of a type" (claims 20, 25), since an image "type" is invariably involved in the Sitka storage choice. In the overall process, the length of the Sitka storage should result in "disposing each of the medical image data sets" (claim 26), when the "storage expiration date" inherent in the storage is reached.

3. Applicant's arguments filed 14 July 2005 have been fully considered but they are not persuasive.

In attempting to establish at page 2 that "Koritzinsky and Sitka do not teach, suggest, or provide motivation for the claimed mobile image data reception device having a function of storing the image data sets", applicant argues that "there is nothing to suggest that the system controllers 30, 46 have a function of storing medical image data sets"—they "merely allow the transfer of information and nothing more". However, the chain of transmission in Howards

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Koritzinsky is from a controller 46 ("storage means") to a computer 72 ("reception device") to the network, and each of these nodes in the connection is in fact a complete computer, and would invariably buffer the information (thus "storing" it) as it passes to a the archive 160 ("storage apparatus") suggested by Sitka.

Applicant then argues (page 3) that "Sitka fails to teach, suggest, or provide motivation for the claimed storage expiration date", since "Sitka merely teaches that an image may be moved from one storage device to another based on when the image was accessed...In such a scheme, there is no storage expiration date because an image may never be deleted as long as the image was recently accessed". However, it remains that the storage units in Sitka have the designations short-term, mid-term and long-term. Because of the finite length of storage this implies, there will have to be expiration at some point.

Concerning claims 19, 22, applicant additionally argues at page 3 that to determine "the storage expiration date" by "using the storage period of the medical image data set and *at least one of a date of reception of the medical image data set and a date of photographing of the medical image data set*" is not suggested by Sitka, since "When an image was *requested* has no bearing on the date of reception or the date of photographing". However, the selective storage in various-term devices in Sitka means that both the reception date and the storage period of the device are factors, in determining the ultimate time at which the storage should expire.

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4. Claims 6, 8, 9/6, 9/8 and 17 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant's observation at page 3 that "the language used by the Examiner in describing these exemplary features is not the same as the language contained in all of the claims" is noted. The Examiner agrees that allowability is "based on its own language, and not based on any paraphrasing of language that may be made by the Examiner". The reasons for allowance, to restate, rest in the monitoring of the "medical image data storing means" to see if "a total amount of the medical image data sets stored" has a difference with respect to "a capacity of the medical image data storage means", so that "receiving the medical image data sets" (claim 6) and "transmitting the reception request signal to the image data storage apparatus" (claim 8) will occur "when the difference becomes smaller than a predetermined value". Howards Koritzinsky, while teaching a networked connection that has storage-bearing intermediate computer nodes, does not teach or suggest this form of monitoring of storage content, nor does Sitka, who merely teaches storage *per se* in an archiving device.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The additionally-cited US Patent documents (see attached form PTO-892) relate to applicant's general topic of the storage of medical image data.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. In responding to this office action, please note that the examiner of record for the above identified application has changed. Any further inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond J. Bayerl whose telephone number is (571) 272-4045. The examiner can normally be reached on M - Th from 9:00 AM to 4:00 PM ET.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca, can be reached on (571) 272-4048. All patent application related correspondence transmitted by FAX **must be directed** to the central FAX number (571) 273-8300.

9. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.



RAYMOND J. BAYERL
PRIMARY EXAMINER
ART UNIT 2173

12 September 2005